Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) An ink jet printhead comprising:

a plurality of nozzles, each nozzle having a respective bubble forming chamber;

at least one heater element disposed in each of the bubble forming chambers respectively, the heater element being configured for thermal contact with a bubble forming liquid;

drive circuitry corresponding to each of the nozzles for controlling the operation of the heater element via electrodes connected between the drive circuitry and the heater element; such that,

heating the heater element to a temperature above the boiling point of the bubble forming liquid forms a gas bubble that causes the ejection of a drop of an ejectable liquid through the nozzle corresponding to that heater element; wherein,

part of the drive circuitry is disposed on one side of the bubble forming chamber, and part of the drive circuitry is formed on the opposing side of the bubble forming chamber, and

the heater element has a bubble nucleation section of a smaller cross section than the rest of the heater element so that the temperature of the bubble nucleation section is heated to above said boiling point before the rest of the heater element, the heater element being configured so that the bubble nucleation section and the rest of the heater element are co-planar and remain co-planar when the heater element is heated.

2. (Original) The printhead of claim 1 wherein the heater elements and bubble forming chamber are symmetrical about a longitudinal plane.

3. (Original) The printhead of claim 1 wherein the bubble forming chamber with a circular cross section wherein the heater element has at least one arcuate section that is concentric with the longitudinal axis of the bubble forming chamber; such that during use, the arcuate section forms a disc-shaped bubble with a point of collapse substantially on the central axis of the bubble forming chamber.

4. (Original) The printhead of claim 1 wherein the gas bubble encircles at least some of the heater element.

5. (Original) The printhead of claim 1 wherein the bubble forming liquid and the ejectable liquid are of a common body of liquid.

6. (Original) The printhead of claim 1 being configured to print on a page and to be a page-width printhead.

7. (Cancelled).

8. (Previously Presented) The printhead of claim 1 wherein each heater element is configured such that an actuation energy of less than 500 nanojoules (nJ) is required to be applied to that heater element to heat that heater element sufficiently to form said bubble in the bubble forming liquid thereby to cause the ejection of said drop.

9. (Cancelled)

10. (Original) The printhead of claim 1 comprising a substrate having a substrate surface, wherein the areal density of the nozzles relative to the substrate surface exceeds 10,000 nozzles per square cm of substrate surface.

11. (Previously Presented) The printhead of claim 1 wherein each heater element has two opposite sides and is configured such that said gas bubble formed by that heater element is formed at both of said sides of that heater element.

12. (Previously Presented) The printhead of claim 1 wherein the bubble which each heater element is configured to form is collapsible and has a point of collapse, and wherein each heater element is configured such that the point of collapse of a bubble formed thereby is spaced from that heater element.

13. (Original) The printhead of claim 1 comprising a structure that is formed by chemical vapor deposition (CVD), the nozzles being incorporated on the structure.

14. (Original) The printhead of claim 1 comprising a structure which is less than 10 microns thick, the nozzles being incorporated on the structure.

15. (Previously Presented) The printhead of claim 1 comprising a plurality of the bubble forming chambers each corresponding to a respective nozzle, and a plurality of said heater elements being disposed within each bubble forming chamber, the heater elements within each bubble forming chamber being formed on different respective layers to one another.

16. (Original) The printhead of claim 1 wherein each heater element is formed of solid material more than 90% of which, by atomic proportion, is constituted by at least one periodic element having an atomic number below 50.

17. (Previously Presented) The printhead of claim 1 wherein each heater element is configured for a mass of less than two nanograms of the solid material of that heater element to be heated to a temperature above said boiling point thereby to heat the bubble forming liquid to a temperature above said boiling point to cause the ejection of a said drop.

18. (Previously Presented) The printhead of claim 1 wherein each heater element is covered by a conformal protective coating, the coating of each heater element having been applied substantially to all sides of the heater element simultaneously such that the coating is seamless.

19. (Currently Amended) A printer system which incorporates a printhead, the printhead comprising:

a plurality of nozzles, each nozzle having a respective bubble forming chamber;

at least one heater element disposed in each of the bubble forming chambers respectively, the heater element being configured for thermal contact with a bubble forming liquid;

drive circuitry corresponding to each of the nozzles for controlling the operation of the heater element via electrodes connected between the drive circuitry and the heater element; such that,

heating the heater element to a temperature above the boiling point of the bubble forming liquid forms a gas bubble that causes the ejection of a drop of an ejectable liquid through the nozzle corresponding to that heater element; wherein,

part of the drive circuitry is disposed on one side of the bubble forming chamber, and part of the drive circuitry is formed on the opposing side of the bubble forming chamber, and

the heater element has a bubble nucleation section of a smaller cross section than the rest of the heater element so that the temperature of the bubble nucleation section is heated to above said boiling point before the rest of the heater element, the heater element being configured so that the bubble nucleation section and the rest of the heater element are co-planar and remain co-planar when the heater element is heated.

20. (Original) The system of claim 19 wherein the heater elements and bubble forming chamber are symmetrical about a longitudinal plane.

21. (Original) The system of claim 19 wherein the bubble forming chamber with a circular cross section wherein the heater element has at least one arcuate section that is concentric with the longitudinal axis of the bubble forming chamber; such that during use, the arcuate section forms a disc-shaped bubble with a point of collapse substantially on the central axis of the bubble forming chamber.

22. (Original) The system of claim 19 wherein the gas bubble encircles at least some of the heater element.

23. (Cancelled)

24. (Original) The system of claim 19 wherein the bubble forming liquid and the ejectable liquid are of a common body of liquid.

25. (Original) The system of claim 19 being configured to print on a page and to be a page-width printhead.

26. (Cancelled)

27. (Previously Presented) The system of claim 19 wherein each heater element is configured such that an actuation energy of less than 500 nanojoules (nJ) is required to be

applied to that heater element to heat that heater element sufficiently to form said bubble in the bubble forming liquid thereby to cause the ejection of said drop.

28. (Cancelled)

29. (Original) The system of claim 19 comprising a substrate having a substrate surface, wherein the areal density of the nozzles relative to the substrate surface exceeds 10,000 nozzles per square cm of substrate surface.

30. (Previously Presented) The system of claim 19 wherein each heater element has two opposite sides and is configured such that said gas bubble formed by that heater element is formed at both of said sides of that heater element.

31. (Previously Presented) The system of claim 19 wherein the bubble which each heater element is configured to form is collapsible and has a point of collapse, and wherein each heater element is configured such that the point of collapse of a bubble formed thereby is spaced from that heater element.

32. (Original) The system of claim 19 comprising a structure that is formed by chemical vapor deposition (CVD), the nozzles being incorporated on the structure.

33. (Original) The system of claim 19 comprising a structure which is less than 10 microns thick, the nozzles being incorporated on the structure.

34. (Previously Presented) The system of claim 19 comprising a plurality of the bubble forming chambers each corresponding to a respective nozzle, and a plurality of said heater elements being disposed within each bubble forming chamber, the heater elements within each bubble forming chamber being formed on different respective layers to one another.

35. (Original) The system of claim 19 wherein each heater element is formed of solid material more than 90% of which, by atomic proportion, is constituted by at least one periodic element having an atomic number below 50.

36. (Previously Presented) The system of claim 19 wherein each heater element is configured for a mass of less than two nanograms of the solid material of that heater element to be heated to a temperature above said boiling point thereby to heat the bubble forming liquid to a temperature above said boiling point to cause the ejection of a said drop.

37. (Previously Presented) The system of claim 19 wherein each heater element is covered by a conformal protective coating, the coating of each heater element having been applied substantially to all sides of the heater element simultaneously such that the coating is seamless.

38. (Currently Amended) A method of ejecting drops of an ejectable liquid from a printhead, the printhead comprising a plurality of nozzles, each nozzle having a respective bubble forming chamber;

at least one heater element disposed in each of the bubble forming chambers respectively, the heater element being configured for thermal contact with a bubble forming liquid and having a bubble nucleation section of a smaller cross section than the rest of the heater element;

drive circuitry corresponding to each of the nozzles for controlling the operation of the heater element via electrodes connected between the drive circuitry and the heater element; wherein,

part of the drive circuitry is disposed on one side of the bubble forming chamber, and part of the drive circuitry is formed on the opposing side of the bubble forming chamber, the method comprising the steps of:

heating the heater elements to a temperature above the boiling point of the bubble forming liquid to form a gas bubble that causes the ejection of a drop of an ejectable liquid from the nozzle and so that the temperature of the bubble nucleation section is heated to above said boiling point before the rest of the heater element, the heater element being configured so that the bubble nucleation section and the rest of the heater element are co-planar and remain co-planar when the heater element is heated; and

supplying the nozzle with a replacement volume of the ejectable liquid equivalent to the ejected drop.

39. (Original) The method of claim 38 wherein the heater elements and bubble forming chamber are symmetrical about a longitudinal plane.

40. (Original) The method of claim 38 wherein the bubble forming chamber with a circular cross section wherein the heater element has at least one arcuate section that is concentric with the longitudinal axis of the bubble forming chamber; such that during use, the arcuate section forms a disc-shaped bubble with a point of collapse substantially on the central axis of the bubble forming chamber.

41. (Original) The method of claim 38 wherein the gas bubble encircles at least some of the heater element.

42. (Original) The method of claim 38 wherein the bubble forming liquid and the ejectable liquid are of a common body of liquid.

43. (Original) The method of claim 38 wherein the printhead is configured to print on a page and to be a page-width printhead.

44. (Original) The method of claim 38 wherein said step of heating the at least one heater element is effected by applying an actuation energy of less than 500nJ to each such heater element.

45. (Cancelled)

46. (Original) The method of claim 38 wherein the printhead includes a substrate on which said nozzles are disposed, the substrate having a substrate surface and the areal density of the nozzles relative to the substrate surface exceeding 10,000 nozzles per square cm of substrate surface.

47. (Original) The method of claim 38 wherein the at least one heater element has two opposing sides and the bubble is generated at both of said sides of each heated heater element

48. (Original) The method of claim 38 wherein the generated bubble is collapsible and has a point of collapse, and is generated such that the point of collapse is spaced from the at least one heater element.

49. (Original) The method of claim 38 wherein the printhead has a structure that is less than 10 microns thick and which incorporates said nozzles thereon.

50. (Original) The method of claim 38 wherein the nozzles of the printhead are formed by chemical vapor deposition (CVD).

51. (Previously Presented) The method of claim 38 wherein the printhead has a plurality of the bubble forming chambers each chamber corresponding to a respective nozzle and a plurality of said heater elements are formed in each of the bubble forming chambers, such that the heater elements in each bubble forming chamber are formed on different respective layers to one another.

52. (Original) The method of claim 38 wherein the heater elements are formed of solid material more than 90% of which, by atomic proportion, is constituted by at least one periodic element having an atomic number below 50.

53. (Previously Presented) The method of claim 38 wherein the step of heating at least one heater element comprises heating a mass of less than two nanograms of the solid material of each such heater element to a temperature above said boiling point.

54. (Original) The method of claim 38 wherein a conformal protective coating is applied to substantially to all sides of each of the heater elements simultaneously, such that the coating is seamless.